State Of California The Resources Agency of California

Memorandum

To: Commissioner Jackalyne Pfannenstiel, Presiding Member
Commissioner Jeffrey D. Byron, Associate Member

Date: January 23, 2008
Telephone: (916) 651-8891

From: **California Energy Commission --** Mary Dyas
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Energy Facilities Siting Project Manager

Subject: **CARRIZO ENERGY SOLAR FARM (07-AFC-8) – ISSUES IDENTIFICATION REPORT**

Attached is the staff's Issues Identification Report. This report serves as a preliminary scoping document as it identifies the issues the Energy Commission staff believes will require careful attention and consideration. However, this report may not include all the significant issues that may arise during the case, as discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. Energy Commission staff will be prepared to discuss the Issues Report at the Informational Hearing and Site Visit scheduled for January 29, 2008.

This report also provides a draft proposed schedule pursuant to the 12-month Application for Certification (AFC) process.

Attachment

cc: Proof of Service List
Docket 07-AFC-8

ISSUES IDENTIFICATION REPORT

CARRIZO ENERGY SOLAR FARM PROJECT

Docket # 07-AFC-8

Table of Contents

PURPOSE OF THE REPORT

This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties of the potential issue that has been identified in the siting process thus far. This issue has been identified as a result of discussions with federal, state, and local agencies, and our review of the Carrizo Energy Solar Farm (CESF) Application for Certification (AFC), Docket Number 07-AFC-8. This Issues Identification Report contains a project description, summary of the potentially significant environmental issue, public comments received, and a discussion of the proposed project schedule. The staff will address the status of the potential issue and progress towards its resolution in periodic status reports to the Committee.

PROJECT DESCRIPTION

On October 25, 2007, Ausra CA II, LLC (dba Carrizo Energy, LLC) submitted an AFC to the California Energy Commission seeking a license to construct and operate a nominal 177 megawatts (MW) net solar thermal power plant, in San Luis Obispo County. At the December 19, 2007, business meeting the Commission accepted the CESF AFC as complete, and staff began its formal review of the proposed project.

The 640-acre proposed project site is located immediately adjacent to California State Route 58 (SR-58)/Carrisa Highway, approximately 3 miles west of Simmler and is in an area zoned for agricultural uses as specified in the San Luis Obispo County General Land Use Plan. Electrical generation is listed in the San Luis Obispo County Land Use Ordinance as an allowed use within the agricultural zone. The 380-acre construction laydown area is located south and adjacent to the proposed project site. Main access to the CESF and the general vicinity will be provided via SR-58, immediately south and adjacent to the site. Project construction is proposed to begin during the first quarter of 2009 and take 35 months to complete. Commercial operation is expected to begin in the first quarter of 2012.

Project Technology: The proposed project design will incorporate Ausra's proprietary Compact Linear Fresnel Reflector (CLFR) technology consisting of a series of slightly curved linear solar reflectors that concentrate solar energy on pipes in an elevated receiver structure approximately 17 m (56 feet) tall. The concentrated solar energy boils water within a row of specially coated stainless steel pipes in an insulated cavity to produce saturated steam. The steam produced in the receivers is collected in a series of pipes, routed to twenty steam drums located in the solar field, and then to two steam drums and two steam turbine generators (STG) in the power block. Steam used by the steam turbines is condensed in two air cooled condensers (ACC) and returned to the solar field.

Facility Operation: The CESF would consist of approximately 195 CLFR solar concentrating lines. Each line contains 10 rows of reflectors divided into 4 segments. In addition, the project will include associated steam drums, STGs, ACCs, and related infrastructure.

The CESF cooling system for heat rejected from the steam cycle will utilize ACCs in order to minimize water use at the CESF. The STGs will exhaust to an exhaust trunk, which carries the steam to the ACCs. All auxiliary cooling systems are closed-loop with fin-fan air coolers.

Distribution: The CESF would include the construction of a new 230 kV switchyard located between the two STGs. The STGs provide the driving force to spin the generator, which converts the mechanical energy into electrical output. The STGs would generate electricity at 13.8 kV. To provide transmission level capability, the electricity generated will be stepped up using two 13.8/230 kV generator step-up transformers. A new single-circuit 230 kV overhead transmission line, approximately 850 feet in length, will interconnect the facility with Pacific Gas and Electric's (PG&E) existing Midway Substation in Kern County by looping into the existing Morro Bay–Midway 230 kV line located north and adjacent to the CESF site.

Water: The project is expected to consume approximately 21.8 acre-feet of water per year. Water will be required for make-up to the solar thermal and steam turbine system, washing of solar reflectors and collectors, domestic and sanitary needs, service water, and fire protection. All water for the proposed project will be obtained from an existing onsite well and used for all process and potable needs. The water is expected to be treated on-site to varying degrees depending on use, with a skid-mounted water treatment system as provided by a contract service. The treatment system would be comprised of equipment for filtering, softening, demineralizing, and sanitizing the raw water. Blowdown and oil/water separator clear discharge will be routed to the onsite raw water storage tank for reuse. Stormwater would be collected onsite and directed to swales and detention areas for percolation into the ground. The sanitary system will consist of a buried septic tank and sanitary leach field.

Schedule: Project construction is proposed to begin during the first quarter of 2009 and take 35 months to complete. Commercial operation is expected to begin in the first quarter of 2012.

POTENTIAL MAJOR ISSUE

This portion of the report contains a discussion of the potential issue the Energy Commission staff has identified to date. This report may not include all the significant issues that may arise during the case, as discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. The identification of the potential issue contained in this report was based on our judgement of whether any of the following circumstances will occur:

- Significant impacts may result from the project which may be difficult to mitigate;
- The project as proposed may not comply with applicable laws, ordinances, regulations, or standards (LORS);
- Conflicts may arise between the parties about the appropriate findings or conditions of certification for the Commission decision that could result in a delay to the schedule.

The following table lists all the subject areas evaluated and notes those areas where the critical or significant issues have been identified and if data requests have been requested. Even though an area is identified as having no potential major issues in this report, it does not mean that an issue will not arise related to the subject area.

Major Issue	Data Request	Subject Area
No	**Yes**	Air Quality
No	**Yes**	Alternatives
Yes	**Yes**	Biological Resources
No	**Yes**	Cultural Resources
No	No	Facility Design
No	No	Geology / Paleontology Resources
No	No	Hazardous Materials Management
No	**Yes**	Land Use
No	**Yes**	Noise
No	No	Public Health
No	No	Reliability / Efficiency
No	**Yes**	Socioeconomics
No	**Yes**	Soil & Water Resources
No	No	Traffic & Transportation
No	No	Transmission Line Safety & Nuisance
No	**Yes**	Transmission System Engineering
No	**Yes**	Visual Resources
No	**Yes**	Waste Management
No	No	Worker Safety/Fire Protection

TECHNICAL ISSUE

Staff has begun its analyses of the proposed project and is currently in the discovery phase of our review process. Staff is assessing the environmental and engineering aspects of the applicant's proposal. A potential issue has been identified in the technical area of Biological Resources.

BIOLOGICAL RESOUCES

Staff has identified the following potential biological resources technical issue:

San Joaquin Kit Fox Population

The Carrizo Plain population of the San Joaquin Kit Fox, a federal and state endangered species, has been identified as a core population in the federal species recovery plan. The applicant has assumed presence of kit fox on the project site, and anticipates that the U.S. Fish and Wildlife Service (USFWS) will issue a Biological Opinion to the U.S. Army Corps of Engineers (USACE) through the federal Endangered Species Act Section 7 process. The Section 7 process may be triggered by the project's need for a Clean Water Act Section 404 permit for impacts to the drainage channel in the construction laydown area, which the applicant believes to be in the USACE's Other Waters of the U.S. classification and subject to USACE jurisdiction. If this federal permit is required, then the USACE must consult the USFWS regarding endangered species issues which would result in a federal Section 7 Biological Opinion.

If this drainage is not subject to USACE jurisdiction, the applicant will be forced to consult directly with USFWS through the Section 10 process, which requires preparation of a Habitat Conservation Plan (HCP) and will take at least two to four years, and potentially longer, to complete. This shift in the schedule caused by the length of the Section 10 process would make the project infeasible.

Staff is working with the applicant, the USFWS, and the USACE, to resolve this biological resource issue in a timely manner.

SCHEDULING ISSUES

Following is staff's proposed 12-month schedule for key events of the project. Timely resolution of the issues is critical to the schedule of this project. Meeting the proposed schedule will depend on: the applicant's timely response to staff's data requests; the timing of determinations by other local, state and federal agencies; and other factors not yet known. The current high workload of siting cases is expected to continue in 2008 and may affect staff's ability to conclude the proceeding in twelve months.

ENERGY COMMISSION STAFF'S

PROPOSED SCHEDULE

CARRIZO ENERGY SOLAR FARM PROJECT

12-MONTH SCHEDULE
(07-AFC-8)

EVENT	DAY*	DATE
Commission determined AFC is complete	0	19-Dec-07
Staff filed Issues Identification Report	37	23-Jan-08
Staff filed Data Requests	35	25-Jan-08
Information Hearing, Site Visit	41	29-Jan-08
Applicant provides Data Responses	68	25-Feb-08
Data Response and Issue Resolution Workshop	77	5-Mar-08
Local, state and federal agency draft determinations	100	28-Mar-08
Staff files Preliminary Staff Assessment (PSA)	165	1-Jun-08
Preliminary Staff Assessment Workshop	170-180	16-Jun-08
Local, state and federal agency final determinations	180	16-Jun-08
Staff files Final Staff Assessment (FSA)	210	16-Jul-08
Committee conducts Evidentiary Hearing*	220-240	TBD
Presiding Member's Proposed Decision (PMPD)*	306	TBD
Committee Hearing on the PMPD*	320	TBD
Committee files revised PMPD*	350	TBD
Commission Decision*	365	TBD

***** Day is based on standard 12-month schedule. The actual Date may be slightly different from the standard schedule due to conflicts with weekends and holidays. Time has been added where necessary. The scheduled dates are subject to information or issues not yet discovered.

****** All events from this date forward will be subject to the Committee's schedules.